Sustainability unit

HW pages are assigned in the “interactive science” workbook, *Water and Atmosphere* edition, published by Pearson.

Week 1: Water

Class 1: Human water cycle In class we map the cycle of human waste with notecards, record the steps in notebooks, and begin listening to “The Poop Train” episode of the “Radiolab” podcast. Starting point 2:30, there’s a curse word before the 2:30 mark. http://www.radiolab.org/story/poop-train/

**HW** p 4-6, and finish listening to “The Poop Train” Episode.

Class 2: Natural water cycle With an empty soda bottle, hot water, ice cubes and a bowl on top, students observe evaporation, condensation and precipitation. They draw and describe what they observe.

**HW** p7-8

Class 3: Watersheds: Students crumple wax paper and place it in a tray. With an eyedropper, they simulate rain and map rivers, lakes, mountaintops and oceans on their “landscape”. On a map, they see the Hudson River Watershed. They conclude that gravity is a driving force in the movement of water.

**HW** p10-13

Class 4 Groundwater and Aquifers: Using an aquarium and sand/gravel, the class makes an aquifer and demonstrates the “sponginess of the planet”.

**HW** p 18-19

Quiz on water

Week 2 plants

Plant experiment- grow a plant missing one of the requirements: soil, air, water, light p17

Wetlands-- erosion demo HW p24-27

Wetlands water filter demo- p28-29

Check on plant experiment- write up lab report how does the wetlands lesson relate to wetlands relate to the plant experiment?

4 Air- bring in water bottles!

Vacuum marshmallows. HW p78-79 bring in a water bottle

Build our own barometer HW p82-83 bring in a water bottle

Build a pump directions:http://arvindguptatoys.com/toys/coin%20bottle.html

HW explain how your pump works

How did ancient people move water?

1 Pont du gard

2 Mayans http://www.mnn.com/green-tech/research-innovations/stories/ancient-mayans-masters-of-water-pressure

3 Chinese- http://www.cits.net/china-guide/places/karez-water-system.html

4 http://www.waterhistory.org/

HW-bring in a bottle

How did ancient people grow food efficiently with water? http://www.lovethesepics.com/2011/02/17-tremendous-terraced-rice-fields/. Photos

Interactive http://www.pbs.org/wgbh/nova/ancient/rice-paddy.html.